AMENDMENTS TO THE CLAIMS

Listing of the claims:

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

1. (Currently Amended) A solid state image pickup device, comprising:

a semiconductor substrate;

a plurality of pixels formed on said semiconductor substrate, each pixel ~~having a plurality of photoelectric conversion elements inclusive of~~ including a first photoelectric conversion element and a second photoelectric conversion element electrically separated; and

a light shielding film formed over said semiconductor substrate, said light shielding film having only one ~~an~~ opening above each pixel,

wherein at least said first photoelectric conversion element and said second photoelectric conversion element have different saturated exposure amounts.

2. (Currently Amended) The solid state image pickup device according to claim 1, wherein assuming that a sensitivity of said first photoelectric conversion element is R1, the sensitivity being an amount of signal charges in response to an exposure amount, a saturated output voltage at a maximum accumulated charge amount is Vsat1 ~~dVsat1~~, a sensitivity of said second photoelectric conversion element is R2, and a saturated output voltage of said second photoelectric conversion element ~~photodiode~~ is Vsat2, and Vsat1/Vsat2 = x and R1/R2 = y, a ratio (y + 1)/(x + 1) is larger than 1.

3. (Original) The solid state image pickup device according to claim 2, wherein $(y + 1)/(x + 1)$ is in a range from 2 to 10.

4. (Original) The solid state image pickup device according to claim 1, wherein at least a half of a plan area of said second photoelectric conversion is covered with said light shielding film.

5. (Original) The solid state image pickup device according to claim 1, further comprising color filters formed above said semiconductor substrate, each of the color filters covering an upper area of said opening of one pixel.

6. (Original) The solid state image pickup device according to claim 1, further comprising micro lenses formed above said semiconductor substrate, each of the micro lenses covering an upper area of said opening of one pixel.

7. (Currently Amended) The solid state image pickup device according to claim 1, further comprising:

a charge reading device disposed near at each pixel;

a first transfer control electrode for transferring electric charges accumulated in said first photoelectric conversion element to said charge reading device; and

a second transfer control electrode electrically separated from said first transfer control electrode, for transferring electric charges accumulated in said second photoelectric conversion element to said charge reading device.

8. (Original) The solid state image pickup device according to claim 7, wherein a combined shape of said first photoelectric conversion element and said second photoelectric conversion element is a rhomboid shape or a truncated rhomboid shape, said first transfer control electrode is disposed along one side of the rhomboid shape, and said second transfer control electrode is disposed along another side of the rhomboid shape.

9. (Original) The solid state image pickup device according to claim 8, wherein said first photoelectric conversion element is disposed in a central area of the pixel and along one side of the rhomboid, and said second photoelectric conversion element is disposed at least along another side.

10. (Original) The solid state image pickup device according to claim 1, wherein said plurality of pixels are disposed two-dimensionally in horizontal and vertical directions, and horizontal positions of pixels disposed along adjacent horizontal lines are shifted.

11. (Currently Amended) A driving method for a solid state image pickup device, comprising:

a semiconductor substrate;

a plurality of pixels formed on said semiconductor substrate, each pixel ~~having a plurality of photoelectric conversion elements inclusive of~~ including a first photoelectric

conversion element and a second photoelectric conversion element electrically separated; and

a light shielding film formed over said semiconductor substrate, said light shielding film having only one ~~an~~ opening above each pixel, wherein at least said first photoelectric conversion element and said second photoelectric conversion element have different saturated exposure amounts, the driving method comprising the steps of:

reading a first signal charge from said first photoelectric conversion element during a first signal read period; and

reading a second signal charge from said second photoelectric conversion element during a second signal read period following the first signal read period.

12. (Original) The driving method for a solid state image pickup device according to claim 11, wherein said plurality of pixels are put in a light shielding state when said first signal read period starts.

13. (Original) The driving method for a solid state image pickup device according to claim 11, further comprising the step of synthesizing an image signal from a first image signal generated from said first signal charge and a second image signal generated from said second signal charge.

14. (Original) The driving method for a solid state image pickup device according to claim 11, wherein when said first and second image signals are

synthesized, component of an image signal with a relatively small saturated exposure amount above a predetermined level is cut off to make a maximum output uniform.

15. (Currently Amended) A driving method for a solid state image pickup device, comprising:

a semiconductor substrate;

a plurality of pixels formed on said semiconductor substrate, each pixel ~~having a plurality of photoelectric conversion elements inclusive of~~ including a first photoelectric element and a second photoelectric conversion element electrically separated; and

a light shielding film formed over said semiconductor substrate, said light shielding film having only one ~~an~~ opening above each pixel, wherein at least said first photoelectric conversion element and said second photoelectric conversion element have different saturated exposure amounts, the driving method comprising the steps of:

reading first and second signal charges from said first and second photoelectric conversion elements; and

synthesizing said first and second signal charges in signal reading device.

16. (New) The solid state image pickup device according to claim 1, wherein said opening above each pixel in said light shielding film exposes at least a portion of said first photoelectric conversion element and a portion of said second photoelectric conversion element.

17. (New) The driving method for a solid state image pickup device according to claim 11, wherein said opening above each pixel in said light shielding film exposes at least a portion of said first photoelectric conversion element and a portion of said second photoelectric conversion element.

18. (New) The driving method for a solid state image pickup device according to claim 15, wherein said opening above each pixel in said light shielding film exposes at least a portion of said first photoelectric conversion element and a portion of said second photoelectric conversion element.

19. (New) The solid state image pickup device according to claim 16, wherein for a sensitivity of said first photoelectric conversion element of R1, the sensitivity being an amount of signal charges in response to an exposure amount, a saturated output voltage at a maximum accumulated charge amount is Vsat1, a sensitivity of said second photoelectric conversion element is R2, and a saturated output voltage of said second photoelectric conversion element is Vsat2, and Vsat1/Vsat2 = x and R1/R2 = y, a ratio $(y + 1)/(x + 1)$ is larger than 1.

20. (New) The solid state image pickup device according to claim 17, wherein for a sensitivity of said first photoelectric conversion element of R1, the sensitivity being an amount of signal charges in response to an exposure amount, a saturated output voltage at a maximum accumulated charge amount is Vsat1, a sensitivity of said second photoelectric conversion element is R2, and a saturated output voltage of said second

photoelectric conversion element is Vsat2, and Vsat1/Vsat2 = x and R1/R2 = y, a ratio (y + 1)/(x + 1) is larger than 1.

21. (New) The solid state image pickup device according to claim 18, wherein for a sensitivity of said first photoelectric conversion element of R1, the sensitivity being an amount of signal charges in response to an exposure amount, a saturated output voltage at a maximum accumulated charge amount is Vsat1, a sensitivity of said second photoelectric conversion element is R2, and a saturated output voltage of said second photoelectric conversion element is Vsat2, and Vsat1/Vsat2 = x and R1/R2 = y, a ratio (y + 1)/(x + 1) is larger than 1.

22. (New) The solid state image pickup device according to claim 19, further comprising:

a charge reading device disposed near each pixel;

a first transfer control electrode for transferring electric charges accumulated in said first photoelectric conversion element to said charge reading device; and

a second transfer control electrode electrically separated from said first transfer control electrode, for transferring electric charges accumulated in said second photoelectric conversion element to said charge reading device, wherein said charge reading device is a channel region of a vertical charge coupled device.

23. (New) The solid state image pickup device according to claim 20, further comprising:

a charge reading device disposed near each pixel;

a first transfer control electrode for transferring electric charges accumulated in said first photoelectric conversion element to said charge reading device; and

a second transfer control electrode electrically separated from said first transfer control electrode, for transferring electric charges accumulated in said second photoelectric conversion element to said charge reading device, wherein said charge reading device is a channel region of a vertical charge coupled device.

24. (New) The solid state image pickup device according to claim 21, further comprising:

a charge reading device disposed near each pixel;

a first transfer control electrode for transferring electric charges accumulated in said first photoelectric conversion element to said charge reading device; and

a second transfer control electrode electrically separated from said first transfer control electrode, for transferring electric charges accumulated in said second photoelectric conversion element to said charge reading device, wherein said charge reading device is a channel region of a vertical charge coupled device.

25. (New) The solid state image pickup device according to claim 7, wherein said charge reading device is a channel region of a vertical charge coupled device.